

CLAIMS

What is claimed is:

1 1. A computer system comprising an execution
2 environment for agents, wherein said execution environment
3 includes a monitor mechanism for monitoring a message
4 transmitted from one of said agents.

1 2. A computer system as set forth in claim 1,
2 wherein said monitor mechanism comprises a manager agent.

1 3. A computer system as set forth in claim 2,
2 wherein said manager agent has a function for receiving a
3 message from a source agent and for transferring said
4 message to a destination agent.

1 4. A computer system as set forth in claim 2,
2 wherein said manager agent has a function for transmitting
3 messages from a specific agent to agents other than a
4 destination agent.

1 5. A computer system as set forth in claim 2,
2 wherein said manager agent has a registration function for
3 registering an agent which has transmitted a registration
4 message to said manager agent in response to receiving said
5 registration message, said agent being operative to begin
6 its activity within said execution environment.

1 6. A computer system as set forth in claim 5,
2 wherein said registration message includes an agent type of
3 a source agent of said registration message, and wherein
4 said registration function of said manager agent performs
5 a registration process in accordance with said agent type.

1 7. A computer system as set forth in claim 2,
2 wherein said manager agent has a function for registering
3 a source agent of a monitor registration message and a
4 condition of messages to be transferred to said source
5 agent and transmitted from another agent in response to
6 receiving the monitor registration message from the source
7 agent which begins its activity within said execution
8 environment, said monitor registration message includes
9 said condition.

1 8. A computer system according to claim 7, wherein
2 said registering function includes:

3 means for determining whether said condition in said
4 monitor registration message is registered in said
5 manager agent; and

6 means for storing a source agent so as to correspond
7 to said condition when said condition is registered.

1 9. A computer system according to claim 7, wherein,
2 in response to the reception of a message transmitted from
3 an agent, said transferring function searches for
4 registered conditions by content of said message, and
5 wherein when there exists a condition that matches the
6 content of said message, said transferring function
7 transmits said message to a registering source agent of
8 said condition.

1 10. A computer system according to claim 1, wherein
2 said execution environment is a virtual mall.

1 11. A computer system according to claim 10, wherein
2 said message includes an agent type of said message, and

3 wherein said agent type is comprised of one of a customer
4 agent and a shop agent.

1 12. A computer system according to claim 2, wherein
2 said computer system further comprising an agent that has
3 means for transmitting a registration message for
4 requesting its registration to said manager agent.

1 13. A computer system according to claim 2, further
2 comprising an agent, said agent including:

3 a data storage for storing a condition of messages to
4 be transferred to itself by said manager agent and
5 transmitted by another agent; and

6 means for transmitting said condition as a monitor
7 registration message to said manager agent.

1 14. A computer system according to claim 13, wherein
2 said agent further comprises:

3 means for receiving a message from another agent;

4 means for, when said received message is a message
5 addressed to a different agent, preparing an
6 associated message that includes contents associated
7 with said received message; and

8 means for transmitting said associated message to said
9 different agent.

1 15. A computer system according to claim 14, wherein
2 said means for preparing said associated message includes:

3 means for checking said contents of said received
4 message and for extracting holding information
5 concerning said contents of said received message; and

6 means for converting said holding information into
7 said form of a message.

1 16. A method executed by a manager agent for
2 monitoring a message transmitted from an agent in an
3 execution environment for agents, said execution
4 environment included in a computer system, said method
5 comprising the steps of:

6 receiving a message transmitted from a specific agent;

7 searching for a registered condition by using contents
8 of said message, and if there is a registered
9 condition matched with said contents of said message,
10 transmitting said message to an agent that registered
11 said matched condition; and

12 transmitting said message to a destination agent of
13 said message.

1 17. A method as set forth in claim 16, further
2 comprising the steps of:

3 receiving a monitor registration message from a
4 registering agent, the monitor registration message
5 including a condition of the messages transmitted from
6 another agent and to be transferred to the registering
7 agent, the registering agent beginning its activity on
8 the execution environment; and

9 in response to receiving the monitor registration
10 message, registering the registering agent and the
11 condition included in the monitor registration
12 message.

1 18. A method as set forth in claim 17, wherein the
2 registering step further includes the steps of:

3 determining whether the condition in the monitor
4 registration message is registered in the manager
5 agent; and

6 if the condition is register, storing the registering
7 agent in correspondence with the condition.

1 19. A method according to claim 16, further
2 comprising the steps of:

3 receiving a registration message from a source agent
4 that has begun its activity within the execution
5 environment; and

6 registering the source agent of the registration
7 message.

1 20. An associated message transmission method
2 executed by an agent in a computer system including an
3 execution environment for agents, the execution environment
4 executing a manager agent for monitoring a message
5 transmitted from the agent, the method comprising the steps
6 of:

7 receiving a message from another agent;

8 if the received message is a message addressed to a
9 different agent, preparing an associated message that
10 includes contents associated with the received
11 message; and

12 transmitting the associated message to the different
13 agent.

1 21. An associated message transmission method as set
2 forth in claim 20, wherein the preparing step further
3 comprises the steps of:

4 checking the contents of the received message;

5 extracting holding information concerning the contents
6 of the received message; and

7 converting the holding information into the form of a
8 message.

1 22. An associated message transmission method as set
2 forth in claim 20, further comprising the step of
3 transmitting a condition of messages transmitted from
4 another agent and to be transferred by the manager agent,
5 as a monitor registration message to the manager agent.

1 23. An associated message transmission method as set
2 forth in claim 20, further comprising the step of
3 transmitting a registration message for requesting the
4 registration of itself to the manager agent.

1 24. A storage medium storing a program for monitoring
2 a message from an agent in a computer system including an
3 execution environment for agents, said program enabling

4 said computer system to perform the steps of:

5 receiving a message from a specific agent;

6 searching for a registered condition by using contents
7 of said message, and if there is a registered
8 condition matched with said contents of said message,
9 transmitting said message to an agent registering said
10 matched condition; and

11 transmitting said message to a destination agent of
12 said message.

1 25. A storage medium as set forth in claim 24,
2 wherein said program further comprises the steps of:

3 receiving a monitor registration message from a
4 registering agent, said monitor registration message
5 including a condition of messages transmitted from
6 another agent and to be transmitted to the registering
7 agent, said registering agent beginning its activity
8 on said execution environment of said agents; and

9 in response to receiving said monitor registration
10 message, registering said registering agent and said
11 message condition included in said monitor
12 registration message.

1 26. A storage medium as set forth in claim 25,
2 wherein said registering step further includes the steps
3 of:

4 determining whether said condition in said monitor
5 registration message is registered in said manager

6 agent; and

7 when said condition is registered, storing said
8 registering agent in correspondence with said
9 condition.

1 27. A storage medium as set forth in claim 24,
2 wherein said program further comprises the steps of:

3 receiving a registration message from an agent that
4 has begun its activity in said execution environment;
5 and

6 registering the source agent of said registration
7 message.

1 28. A storage medium storing an agent in a computer
2 system including an execution environment for agents, said
3 execution environment executing a manager agent for
4 monitoring a message from said agent, said agent causing
5 said computer system to perform the steps of:

6 receiving a message from another agent;

7 if the received message is a message addressed to a
8 different agent, preparing an associated message that
9 includes contents associated with the received
10 message; and

11 transmitting said associated message to said different
12 agent.

1 29. A storage medium as set forth in claim 28,
2 wherein said preparing step further includes the steps of:

3 checking said contents of said received message;
4 extracting holding information concerning said
5 contents of said received message; and
6 converting said holding information into said form of
7 a message.

1 30. A storage medium as set forth in claim 28,
2 wherein said agent further causing said computer system to
3 perform a step of transmitting a condition of messages
4 transmitted from another agent and to be transferred by
5 said manager agent, as a monitor registration message to
6 said manager agent.

1 31. A storage medium as set forth in claim 28,
2 wherein said agent further causing said computer system to
3 perform a step of transmitting a registration message for
4 requesting the registration of itself to said manager
5 agent.